

## ABSTRACT:

A display device comprising a deflection unit and a cathode ray tube having an in-line electron gun. The electron gun comprises a main lens portion having means for generating a main lens field and an auxiliary field. Furthermore, the electron gun comprises a prefocusing lens portion having a first, a second and a third electrode for generating a prefocusing lens field. In operation, in a direction perpendicular to the in-line plane, the auxiliary field and the main lens cause the electron beam to leave the main lens substantially parallel to the in-line plane, whereby the diameter of the electron beam at a gap of the main lens at the anode side is smaller than or equal to the diameter of the aperture of the second electrode throughout the deflection of the electron beam across the display screen. By virtue thereof, an improved picture reproduction can be obtained.

Fig. 3